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Case Report

A Case Report of Rare Fungal Lesion

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ABSTRACT

Aim: Sporotrichosis is a common subcutaneous mycotic fungal infection caused by the dimorphic fungus sporothrixschenkii

Case Report: Here we report a rare case, 50 years old male, farmer by occupation presented with history of pain and swelling both the forearms for a duration of 6 months. Diagnosed with Sporotrichosis fungal infection on tissue biopsy.

Discussion: Sporotrichosis is a rare, acute or chronic fungal infection caused by the dimorphic fungus sporothrixschenkii. Infection commonly results from percutaneous inoculation of infected wood splinters or thorns. Farmers, florist and gardeners are most usually affected. In our case also patient was a farmer by occupation. Sporotrichosis is a slowly progressive disease and initial symptom may appear 1 to 12 weeks after the exposure to the fungus.

Conclusion: As Sporotrichosis is an uncommon fungal disease awareness of this disease and an extensive environmental study is required to understand the actual burden of the disease.

Key Words: Sporotrichosis, Fungus, Subcutaneous

INTRODUCTION

Most common subcutaneous mycosis is Sporotrichosis.[1]It is often acquired by trauma.[1] It is caused by one of the species of the Sporothrixschenckii family. More than 6 species have been identified by molecular techniques.[1]the most common presentation is the cutaneous form. The disease has been classified into three clinical forms: cutaneous-lymphatic, fixed and disseminated.[1.] Most common location is the upper limbs, while in children it tends to occur more commonly on the face, in adults.[1]

The form of transmission is traumatic inoculation of the organism into the skin, through contact with contaminated soil, plants or organic substrates.[2] Immunosuppressed individuals are more prone for Pulmonary, mucosal, disseminated, Osteoarticular infections.[1]The diagnosis is suggested by biopsy specimen and confirmed by tissue culture.[1]

CASE REPORT

We here present a 50 years old male, farmer by occupation presented with history of pain and swelling both the forearms for a duration of 6 months .On examination patient has multiple ulcerated plaques and papules in a linear pattern on the right forearm(Figure 1) and scattered lesions on the left forearm and left leg. The lesion on the left forearm was biopsied and sent for histopathological examination.

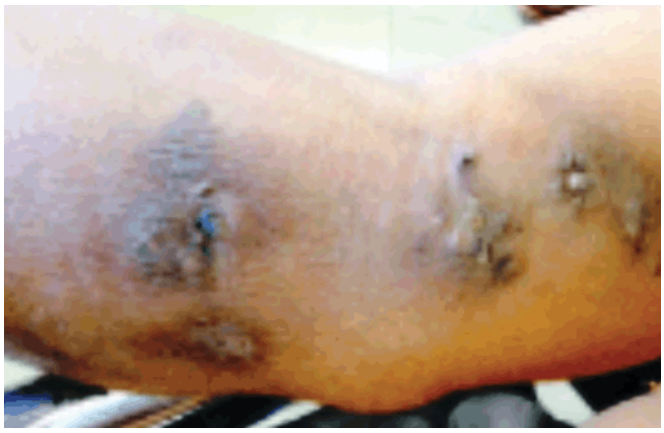

Figure 1: Right forearm showing ulcerated plaques and papules.

Grossly we received formalin fixed grey white multiple soft tissue bits measuring 0.5*0.5cm to 0.5*0.3cm each.

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Microscopically skin with focal area of ulceration covered by exudate composed predominantly of neutrophils was present. The dermis was also showing multiple granulomas composed of epithelioid cells, histiocytes, foreign body type of multinucleated giant cells and dense neutrophilic inflammatory infiltrates (Figure 2).

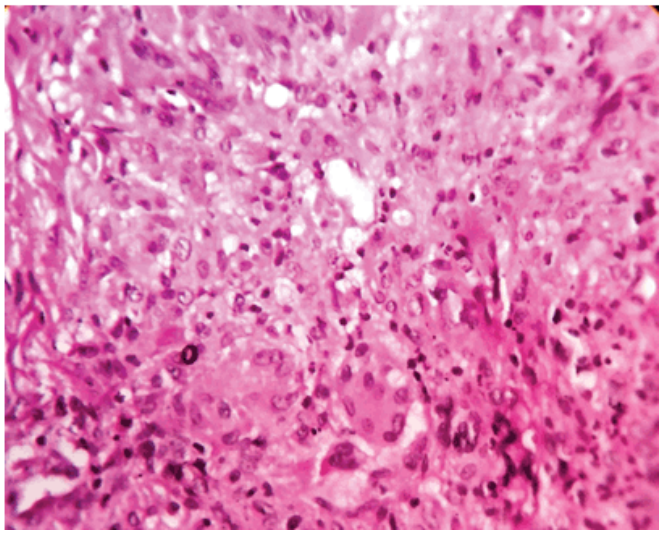

Figure 2: Showing epithelioid cells with multinucleated cells forming granuloma surrounded by neutrophilic inflammatory infiltrates, H&E 40X.

Special stains were done. Periodic Acid Shiff was showing round to oval spores measuring 4-6µm in size within the dermal granuloma that stained more strongly at the periphery than in the centre. Small cigar shaped bodies were also present.

GMS also confirmed the findings as seen in the PAS (Figure 3).

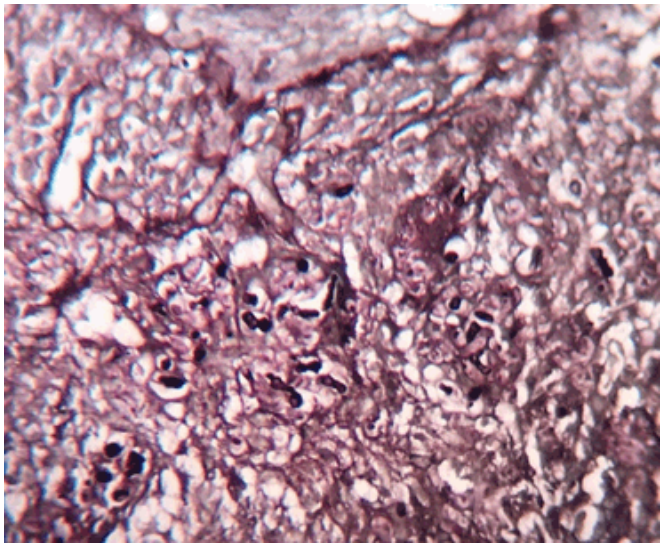

Figure 3: Gomori Methanamine Silver stain showing oval to round spores within the dermal granuloma 40X.

DISCUSSION

Sporotrichosis is a rare, acute or chronic fungal infection caused by the dimorphic fungus sporothrixschenkii[3]. More than 6 species, such as S schenckiisensustricto, Sporothrixbrasiliensis, Sporothrixglobosa, Sporothrixmexicana, and Sporothrixalbicans, have been identified by molecular techniques.[1]The first case was reported in 1898 by Schenck who demonstrated the pathogenicity of this fungus[4]. Infection commonly results from percutaneous inoculation of infected wood splinters or thorns [5].Farmers, florist and gardeners are most usually affected. [5]In our case also patient was a farmer by occupation.

Sporotrichosis is a slowly progressive disease and initial symptom may appear 1 to 12 weeks after the exposure to the fungus.

Unusual presentations of Sporotrichosis also have been reported.[6] Brisa et al presented rare case of sporotrichosis presenting as an ear pinna lesion.[7]Similarly Henry T. Lederer reported a case of Osteoarticularsporotrichosis.

Paola Machado Gomes Esteves et al reported Sporotrichosis in a HIV positive patient, resulted from fungal hematogenic dissemination from an initial inoculation site[8]

Development of systemic sporotrichosis although rare, occurs particularly in person with a immunosuppression, such as patients receiving long term systemic corticosteroids. S. Schenckii is uncommon opportunistic in HIV –infected individuals, but disseminated sporotrichosis has been seen in patients with AIDS.[9]

Clinical cases of Sporotrichosis have been classified into lymphangitic or lymphocutaneous lesions, localized or fixed type, multifocal or disseminated and extracutaneous types by Sampaio and Lacaz.[10] Clinical manifestations most commonly include cutaneous with papulonodular lesions and lymphocutaneous forms (adenopathy and lymphangitic spread) of the infection. Rarely the infection involves the joints. Commonly affected joint is knee.[7] The lymphocutaneous form of this infection starts as a painless papule that grows into an ulcer, usually on a finger or hand. And also a chain of asymptomatic nodules appears along the lymph vessels draining the area called sporotrichosis spread which undergoes suppuration and subsequent ulceration.

Whereas in a fixed cutaneous form, a solitary plaque or occasionally a group of lesions are seen, commonly on an arm or on the face showing superficial crusting or a verrucous surface.[11,12,13]

The diagnosis of Sporotrichosis is established by culture or histopathology findings. The time for growth on cultures is approximately 8 days, butMayrequire2–4 weeks. Histological findings can include granulomatous inflammation with budding yeasts that are round to oval, 3–5-µm in diameter,

and appear as elongated, cigar-shaped bud. In our case the histopathology hematoxylin and eosin sections were showing granulomatous inflammation and confirmed Sporotrichosis fungal infection with PAS and GMS special stains. (Figure 1 & 2)

Immunohistochemical staining using primary antibodies directed against S. Schenckii has high sensitivity compared to histochemical methods in which the organism can be demonstrated.[14]

Treatment in most cases is Itraconazole[15]. For cutaneous and lymphocutaneous forms, the Infectious Diseases Society of America(IDSA)guide lines recommend Itraconazole at 200mg orally daily for at least 2–4 weeks after resolution of all lesions(typically for 3–6 months) [16]. In our current case report also patient was treated with Itraconazole 200mg.

For systemic or disseminated cases, amphotericin B is the treatment of choice. Differential diagnosis include blastomycosis were the reaction pattern is very similar so special stains for fungal forms should be performed.

If the fungus is not found in sections, a diagnosis of sporotrichosis can only be suspected. But tests like sporotrichin test can be done which is always positive except in cases with disseminated diseases.[17]

CONCLUSION

As Sporotrichosis is an uncommon fungal disease and seen among our population we reiterate the need for a high index of clinical suspicion and pivotal role of laboratory findings to aid in prompt diagnosis and patient management. Awareness of this disease and an extensive environmental study is required to understand the actual burden of the disease.

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